

USE OF BEHAVIORAL PROCEDURES
TO MAINTAIN WEIGHT LOSS IN
THE PRADER-WILLI SYNDROME:
A FIVE-YEAR FOLLOW UP ¹

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The Prader-Willi Syndrome, originally described in 1956 by Prader, Labhart and Willi, is characterized by mental retardation, hypotonia, early childhood obesity, short stature, and hypogonadism. Individuals with this syndrome frequently exhibit inappropriate behaviors such as food stealing, gorging, consumption of unusual objects or products commonly considered to be unappealing and unappetizing, and engaging in temper tantrums and other maladaptive social behaviors (Zellweger and Schneider, 1968; Holm and Pipes, 1976).

Individuals with the Prader-Willi Syndrome have been extremely unresponsive to all but very intensive treatments involving closed and carefully controlled environments. Progressive obesity eventually becomes life-threatening with pneumonia and cardiovascular complications being the usual causes of death (Thompson, Kodluboy, and Heston, 1980).

Attempts to control the obesity of individuals with this syndrome generally have consisted of trying to manage the nutrition and caloric intake by providing low calorie foods and making other food inaccessible. Coplin, Hine, and Gormincan (1976) have reported that such attempts to control obesity by dietary management are

frequently unsuccessful, despite the use of reduction diets, physical exercise, and anorexigenic drugs. Further inappropriate behaviors, such as stealing and hoarding of food, can severely complicate such nutritional management programs.

Recently, three studies have been published which support the use of behavioral treatment procedures with individuals having the Prader-Willi Syndrome. Altman, Bondy, and Hirsch (1978) reported that the use of self-monitoring combined with contingency contracting resulted in weight loss, modification of dysfunctional eating habits, and increased or sustained exercise for two obese, mentally retarded adolescent females with the Prader-Willi Syndrome. Marshall, Elder, Obasky, and Liberman (1979), reported weight losses after teaching four young adults with the syndrome to subdivide meal portions of a reduction diet and to consume the smaller of the portions. Ingestion of unapproved foods between meals resulted in loss of the next meal, and grounds privileges were made contingent upon weight loss and no more than two meal violations per week. Thompson, Kodluboy, and Heston (1980) evaluated the effects of using social isolation, aversion-relief treatment, and one-to-one monitoring with point-earning and point-loss contingencies with a 22-year-old woman with Prader-Willi Syndrome; they found that close supervision with point loss consequences for inappropriate eating was the most effective procedure in obtaining weight reduction.

Although these studies demonstrated that behavioral procedures can be effective in helping individuals having the Prader-Willi Syndrome to lose weight, none of them included long-term follow-up data. The purpose of this paper is to describe the results of using a variety of behavioral procedures with an institutionalized individual having Prader-Willi Syndrome and their effects on

¹Data from the first two years covered by this study were presented in Plaska and Friman (Note 1).

weight and maintenance of weight reductions over a five-year period.

METHOD

Subject

Ray is a 31-year-old male, 4 foot, 11 inches tall, who was diagnosed as having the Prader-Willi Syndrome. Ray is classified as mildly retarded on the basis of results from the Weschsler Adult Intelligence Scale and the Adaptive Behavior Scale. He has been institutionalized since he was 13 years old. On admission, he weighed 212 pounds.

Since his admission to the institution, management of Ray's diet had been the standard treatment procedure used to control his obesity, and these procedures had proven to be generally ineffective. Ray also had a long history of stealing, hiding, and eating food prohibited by his diet, and he often engaged in aggressive and disruptive behaviors when prevented from eating such items or when he was caught stealing them.

Procedure

Baseline. During the eight-month period prior to intervention, Ray was on a controlled diet designed to limit his caloric intake to 800 calories a day. During this period, Ray was weighed monthly by a nurse assigned to his cottage, but there were no systematic contingencies in effect for either weight gain or loss. If he was caught with food prohibited by his diet, it was taken away.

Phase 1. Following the baseline period, a treatment phase using contingency management and overcorrection was begun. During this phase, Ray was reinforced with yogurt for following his diet and for not stealing food. Yogurt was used as a reinforcer since it was a low-calorie food that Ray liked. If Ray was caught stealing food or possessing food not allowed by his diet, he would be verbally prompted through an apology practice procedure for 30 minutes. During this phase, it became apparent that yogurt was not a very powerful reinforcer, and problems were encountered in carrying out the overcorrection procedure.

Phase 2. The use of yogurt as a reinforcer and the verbal overcorrection procedures were replaced with contingency contracts. These contracts were mutually

developed and agreed to by Ray and the cottage staff and specified what reinforcers Ray would receive if he did not engage in the target behaviors. In this phase Ray was allowed to select his own reinforcers from a list of items. The items that he selected were then used contingently to reinforce Ray for not engaging in target behaviors. Ray was also reinforced for losing weight. The amount of weight to be lost was negotiated between Ray and the staff and was included in the written contract. If Ray engaged in any of the target behaviors during this phase, he did not receive the negotiated reinforcers and was required to exercise in the cottage to lose weight. During this phase, an out-of-town, overnight trip proved to be a very powerful reinforcer for Ray.

Phase 3. Ray's program was expanded into a token economy with a response cost component. Ray earned points each day for a wide variety of appropriate behaviors, such as maintaining his current weight, losing additional weight, exercising, participating in skill training programs, and completing adaptive daily living skills. Ray lost a specified number of points from those he had accumulated whenever he was caught stealing, possessing, or eating food prohibited by his diet. He also lost points for each pound gained since the preceding week. At the beginning of this phase, Ray and the cottage staff agreed to specific reinforcers that he could purchase with his points. Again, an overnight, out-of-town trip proved to be the most powerful reinforcer for Ray.

Phase 4. Ray's most powerful reinforcer (his out-of-town trip), was eliminated because of Ray's behavior during one of the trips. During this phase, the token economy was revised several times in an attempt to identify and include additional reinforcers, including dinner in town and various snacks. Ray began to steadily gain weight at this point, and none of the reinforcers tried appeared to be as powerful as the opportunity for the overnight trip.

Phase 5. Following the loss of the overnight trip, the token economy was discontinued for lack of an effective reinforcer, and Ray was gaining weight. Medical staff suggested trying the Weight Watchers Program. This would provide Ray with the same amount of calories as before, but

would also provide him with a larger variety of food. Before this was initiated, it was determined that Ray had diabetes. He was then restricted to a 1200 calorie per day, diabetic diet, and the Weight Watchers Program could not be used. Ray's weight remained high but stable during this phase.

New contingencies were established to reinforce Ray for attendance at weight training classes to increase the amount of exercise he was performing. These contingencies consisted of off-grounds trips for dinner as reinforcers for attendance at required exercise classes. During this phase, the reinforcers used, and the loss of them, appeared to have little impact on Ray's behavior or weight.

Phase 6. Ray's health had become a major concern. A new intervention phase was implemented, consisting of positive reinforcement for appropriate behaviors and restriction to the cottage for inappropriate behaviors. Ray was reinforced for completing adaptive daily living skills, attendance and active participation in exercise classes, completing 20 minutes of daily exercise in the cottage, and not exhibiting any maladaptive behaviors (possession of non-diet or stolen food, possession of pass keys, or being in restricted areas).

These behaviors were then monitored daily, with feedback provided to Ray. If Ray did not exhibit maladaptive behaviors and completed all of the required adaptive behaviors each week, he earned a trip to town for dinner and had the opportunity to purchase reinforcing items.

If Ray exhibited any of the maladaptive behaviors or did not complete his daily adaptive behaviors, he was then restricted to the cottage for 48 hours. If Ray engaged in aggression or property destruction, the 48-hour restriction started over. This would continue until Ray began completing the required activities. If Ray had a tantrum (crying, screaming, or whining) at any time during the 48 hours, he could not receive any pop, coffee, or tobacco. When this occurred, though, Ray was given the opportunity to earn these items by completing extra exercises.

RESULTS

As shown in Figure 1, Ray's average weight during the baseline period was 320

pounds. The first phase of intervention was in effect for one month; during this period, Ray's average weight was 328 pounds. The second phase of intervention was in effect for twelve months. During this phase, Ray's average weight decreased to 290 pounds. During the last month of this period, his average weight was 276 pounds, a decrease of fifty-two pounds from his average weight in Phase 1. During the third phase of intervention (a token economy in effect for nine months), Ray's weight averaged 278 pounds. During Phase 4, a 13-month period which followed the loss of Ray's most powerful reinforcer, Ray's weight increased from a low of 279 pounds to 315 pounds. During Phase 5, a 12-month period during which additional medical concerns were identified, Ray's weight stabilized at an average of 304 pounds. During the last phase of intervention Ray's weight dropped from 302 pounds to 194 pounds. Compared to his average weight during the baseline period, this was a loss of 126 pounds.

DISCUSSION

The effects of the various interventions we have used in this program over the past five years have demonstrated that behavioral procedures can be effective in helping individuals with Prader-Willi syndrome to lose significant amounts of weight.

The results of the studies by Altman, et al. (1978), Marshall, et al., (1979), and Thompson, et al., (1980) have also demonstrated this. Each of these studies used combinations of reinforcement and punishment procedures to effect weight loss. The results we obtained across the different phases of the intervention indicate that such combinations were the most effective in this case as well. Ray's weight loss was most significant during Phase 2, when the out-of-town overnight trip was used as a reinforcer combined with response cost contingencies, and also during Phase 6, when an off-grounds trip was used as a reinforcer combined with restriction to the cottage.

We have learned that a strong physical craving for food is associated with the Prader-Willi Syndrome, and strong reinforcers must be selected for use in treatment programs. In addition, it appears that punishers may be an essential component.

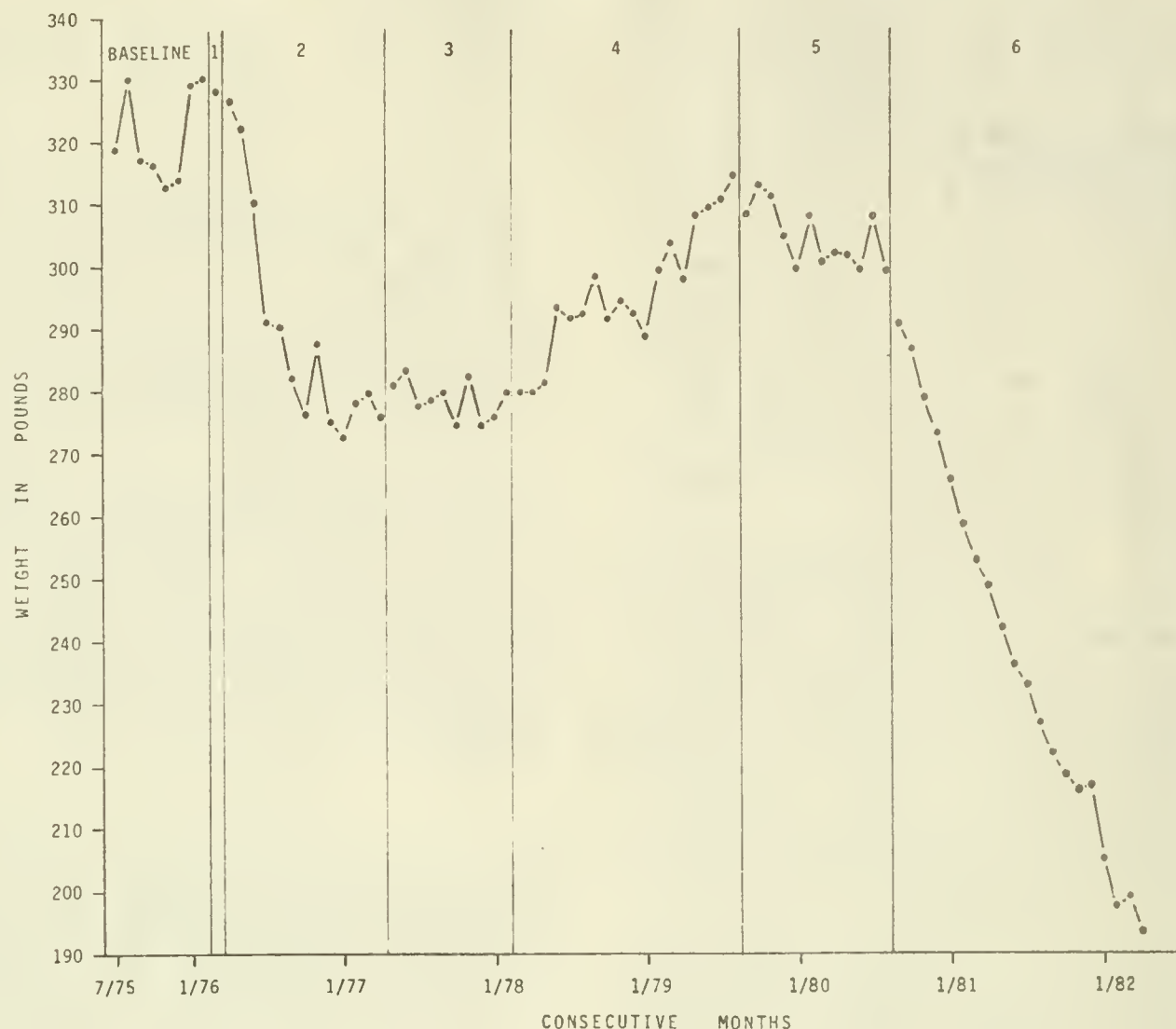


Figure 1. Subject's weight loss during the period from July, 1975, through April, 1982

As in any behavioral program, though, punishers should be used only when they are necessary and can be justified as being in the best interest of the client. Punishers should always be used in conjunction with reinforcement procedures to strengthen appropriate forms of the target behavior or to develop appropriate alternative behaviors. In addition, their use should be thoroughly reviewed and continually monitored.

We have also learned that, with Prader-Willi individuals, it is important to consequence not only changes in weight, but also the specific behaviors associated with gaining or losing weight. The long term goal of such interventions should be to teach the individuals how to alter and to control their eating behaviors and to maintain weight losses once they are achieved.

In Ray's case, he has become more responsible and aware of the consequences his behavior has upon his weight. He is proud of what he has accomplished, and we have been able to fade out some of the monitoring and supervision provided by staff. However, as Marshall, et al., (1979) concluded in their study, some degree of supervision may always be required for individuals with the Prader-Willi Syndrome.

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Editor's note: This issue of the *Boulder Behaviorist* comprises three case studies that were presented at The Second Montana Conference on Developmental Disabilities. In all, 11 presentations were given by Boulder River School and Hospital employees at the conference, which was held October 22 and 23, 1981, at Eastern Montana College in Billings.

Support for the conference was provided by the Developmental Disabilities Planning and Advisory Council, the Department of Institutions, the Department of SRS (Developmental Disabilities Division), the Montana University Affiliated Program, the Office of Public Instruction, Eastern Montana College, and Billings Workshop, Inc.

The conference is a valuable forum for all who work with the developmentally disabled, and we are happy to note that the third conference is scheduled for September 30 and October 1, 1982, at Montana State University in Bozeman.

USE OF A TOKEN ECONOMY WITH AN INDIVIDUAL IN A RESIDENTIAL FACILITY AND ITS EFFECTS UPON THE BEHAVIOR OF DIRECT-CARE STAFF

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Applications of operant techniques in treatment and education have proliferated in recent years. Among the various techniques, token economies have been particularly popular (Kazdin, 1977). A token economy is a system in which an individual is given an object which serves as a conditioned reinforcer that can be exchanged for a variety of back-up reinforcers. Within these systems, an individual generally earns tokens contingent upon specified appropriate behaviors and loses them by being fined for engaging in specific inappropriate behaviors. The tokens can then be exchanged at predetermined times or accumulated to be spent later.

Token economies have been implemented in diverse settings and with a variety of populations (Carlson, Hersen & Eisler, 1972; Kazdin & Bootzin, 1972; Liberman, 1968; Milby, 1972; O'Leary & Drabman, 1971; Turton & Gathercole, 1972). They have been shown to be effective with psychiatric patients, delinquents, adult offenders, drug addicts, alcoholics, children, and adults in outpatient treatment centers as well as in classroom settings. Token economies have also been widely used with developmentally disabled individuals (see Kazdin, 1977).

Evaluations of token economies generally have been limited to describing the beneficial effects they have on the behavior of the particular clients involved; they have often ignored the effects such systems may have upon staff behavior in the treatment setting. This paper describes a token

economy that was used with an individual at Boulder River School and Hospital. Of concern are not only the effects it had upon her behavior, but also the changes that were observed in the behavior and the attitudes of the direct-care staff who were involved in the program.

METHOD

Subject

Janie is a 15-year old female, diagnosed as being severely mentally retarded. Her IQ is 27, based on the results of the Weschler Intelligence Scale for Children. She had lived at home and attended public school prior to being admitted to Boulder River School and Hospital in June of 1980. She was assigned to a cottage in which 28 severely and profoundly retarded women resided.

Janie exhibited a variety of maladaptive and inappropriate behaviors. She was often noncompliant and aggressive, and she engaged in a variety of disruptive behaviors, including property destruction, feces smearing, public masturbation, and inappropriate verbalizations.

A time-out procedure was implemented to consequate Janie's maladaptive behaviors, but it was not effective in reducing their frequency. Observations of the staff during this time indicated that some of them rarely reinforced Janie for any appropriate behavior and that most of their interactions with her were consequent to her maladaptive behaviors. They often complained about her behavior and were reluctant to interact with her. Some had even requested a transfer out of the cottage because of her maladaptive behaviors.

Procedure

A token economy system was developed to reinforce Janie for behaving appropriately and to provide a structure that required staff to interact with her in a more reinforcing manner.

Phase 1. Initially, Janie was given a token paired with behavior-specific praise at the end of each 15-minute interval during which she had not engaged in any of the target maladaptive behaviors. The tokens were immediately exchanged for an edible reinforcer of her choice. This was done to establish the tokens as conditioned reinforcers with Janie and to train the staff

in the proper procedures. This phase was in effect for 48 hours.

Phase 2. During this phase, the tokens were again delivered at the end of each 15-minute interval during which the target behaviors did not occur, but Janie was allowed to accumulate them and spend them for a variety of preferred items. These ranged from edible reinforcers (2 tokens) to an off-grounds trip to town (20 tokens). The trips to town were highly motivating for Janie. Observations of the staff during the phase indicated there was some inconsistency with the implementation of the procedures. Monitoring of their performance was increased and followed with feedback.

Phase 3. During this phase tokens were delivered with behavior-specific praise at the end of each 30-minute period during which the target behaviors did not occur.

If any of the target behaviors occurred during any of the phases, a time-out contingency was implemented; Janie was required to stand in the corner for 10 minutes without displaying any target behaviors. If she engaged in additional target behaviors while standing in the corner, the contingency was extended for an additional 10 minutes up to a maximum of one hour. If Janie engaged in environmental disruption, she was also required to restore the environment and practice using the items appropriately for 30 minutes.

RESULTS

No baseline data were taken because of the severity of the maladaptive behaviors and the risk that ignoring them would have posed for the other clients in the cottage. A time-out procedure was initially used to consequate the behavior, and as shown in Figure 1, Janie's incidents of aggression during this 6-week period averaged 20.2 incidents per week. The frequency of her environmental disruption during this period averaged 7.5 incidents per week.

During Phase 1 of the Token/Time-Out procedure, an initial reduction in the frequency of the target behaviors was observed. The average frequency of Janie's aggressive behavior during the first 8 weeks of the Token/Time-Out procedure was 9.5 per week, compared to an average of 20.2 during the Time-Out only period. The average frequency of Janie's environmental disruption during this period was 7.88 incidents per

week. This was a slight increase (.38/wk.) compared to the frequency of Janie's environmental disruption during the Time-Out only phase.

At this point (indicated by the arrow on the graph), increased observation and monitoring of the staff's performance were initiated, combined with additional modeling of the procedures and feedback regarding their performance. During the next 3 weeks, the frequency of Janie's maladaptive behavior decreased dramatically. The mean frequency of aggression decreased to 2 incidents per week, and the mean frequency of environmental disruption also decreased to 2 incidents per week.

Janie then spent 2 weeks at home. As shown on the graph, her behavior continued to improve following her return to the institution. Within the first two weeks of her return, Phase 2 criteria were met, with no occurrences of aggression and one minor incident of environmental disruption. During Phase 3, Janie's maladaptive behaviors were virtually nonexistent; she exhibited no aggressive behavior and a total of 8 incidents of environmental disruption.

DISCUSSION

The Token Economy/Time-Out procedure proved to be effective in reducing the frequency of Janie's maladaptive behaviors, compared to the use of the Time-Out procedure alone. The aggressive behavior was reduced dramatically in an 11-week period, and the frequency of environmental disruption also decreased.

The improvements in Janie's behavior enabled her to be transferred to a less restrictive residential setting. Prior to her transfer, improvements in her behavior during off-grounds trips were also noted. Such trips were very reinforcing for Janie, and by the time of her transfer she was included in 2 to 3 outings per week.

This program was not originally intended to be a research study, and thus the results are somewhat confounded. For example, there were a number of components used in addition to the token system, specifically time-out,

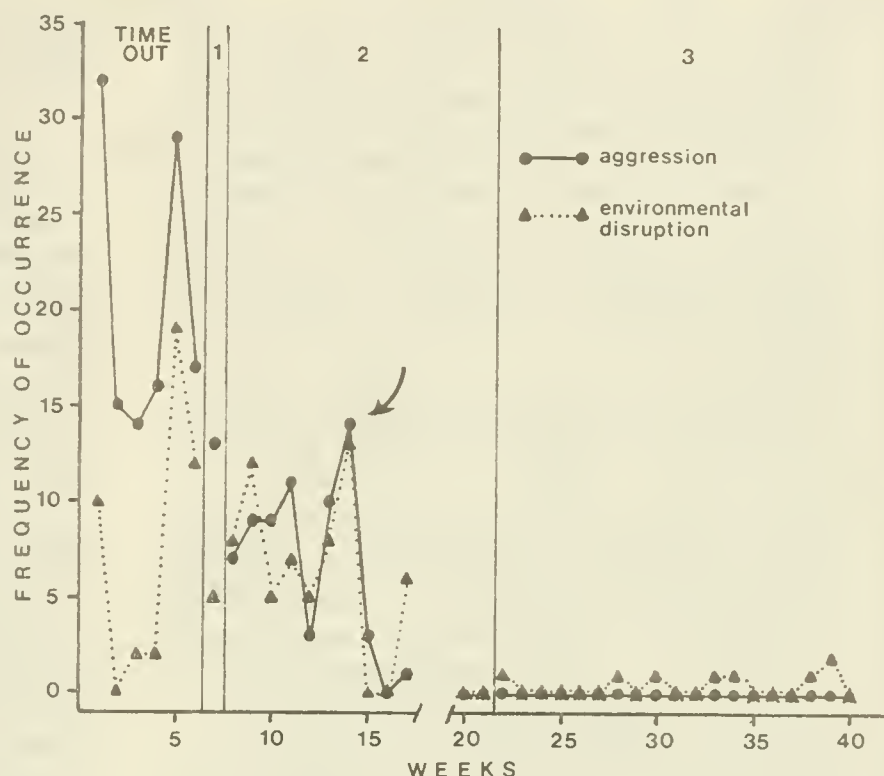


Figure 1. Frequency of aggression and disruption across conditions of time-out only and three phases of token economy + time-out

restitution and positive practice; their effects were not separately evaluated. Also, as noted earlier, we did not take any true baseline data and no reversal was done.

No systematic data were taken on staff behavior. However, anecdotal data from numerous observations of staff during this program strongly suggest that the procedures had beneficial effects upon their behavior. Staff interacted more frequently and more appropriately with Janie. They also provided Janie with much more positive reinforcement as her behavior improved. Their attitudes toward her improved, and their comments about Janie become much more positive.

Although our conclusions are limited due to the lack of a stronger experimental design, we think that token systems can be a very useful tool for program managers. They can result in improvements in client's behaviors and also provide a structure for increasing staff interactions with clients. They require staff to attend to the appropriate behaviors of clients and require them to reinforce the clients, thus increasing the amount of reinforcement provided within the clients' environment.

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THE USE OF DRO AND RESPONSE-CONTINGENT, RESTRICTIVE CLOTHING TO DECREASE PUBLIC DISROBING (STRIPPING) AND CLOTHES RIPPING

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Public disrobing or stripping is an inappropriate behavior that is not only socially unacceptable, but can present a health hazard to the individual. When it occurs in institutional settings, it diverts the staff from habilitative efforts and can disrupt adaptive training (Durana & Cuvo, 1980). Because stripping usually results in immediate attention from staff, it is often unintentionally strengthened and maintained in such settings, and be-

cause it is so socially unacceptable, it can prevent placement of the individual into less restrictive settings.

In some facilities, common approaches to the problem of stripping have included cloistering strippers from public view, limiting their freedom to walk about the grounds, restricting them from participating in off-grounds trips, or requiring them to wear restrictive clothing which cannot be removed. These practices do not treat the problem, but merely confine it to specific areas. The use of restrictive clothing presents some additional problems. It prevents independent toileting behaviors, and attempts to remove the clothing may result in it being torn, thus adding an additional inappropriate behavior to the individual's repertoire (Foxy, 1976).

Various behavioral procedures have been reported in literature as being effective in reducing public disrobing. These include DRO employed alone (Thompson & Grabowski, 1972), DRO combined with time-out (Paul & Miller, 1971), DRO combined with response cost (Schaeffer & Martin, 1969), DRO combined with restitution and negative practice (Durana & Cuvo, 1980), time-out with physical restraints (Hamilton, Stephens & Allen, 1967), and overcorrection (Foxy, 1976).

Overcorrection was shown to be an extremely effective procedure to eliminate stripping in the study conducted by Foxy (1976), but it is an inappropriate procedure for use with some individuals or certain treatment settings. The purpose of this paper is to describe the effects of an additional treatment procedure for stripping which was developed after problems were encountered implementing an overcorrection procedure.

METHOD

Subject

Don is a 19-year-old visually impaired male. He has limited vision in one eye and is considered to be legally blind. Don is classified as profoundly retarded, based on the results of the Adaptive Behavior Scale and The Vineland Social Maturity Scale. His intellectual functioning level has not been determined due to his uncooperativeness, his lack of verbal abilities, his visual impairments, and the maladaptive behaviors he has exhibited during testing sessions.

Don has been institutionalized at Boulder River School and Hospital for 12 years. Over this time, Don has engaged in numerous maladaptive behaviors, including aggression (biting, tripping, head butting, hitting, and kicking), property destruction (ripping clothes and bedding, throwing objects, kicking walls and furniture), and environmental disruption (vomiting and throwing it at people, playing with, slinging, and smearing saliva on people, continuously spinning in circles, chronic noncompliance, and inappropriate toileting behaviors). A review of his medical file also reveals that he has been stripping, ripping, and eating his clothing since he was 7 years old.

Overcorrection, as outlined by Foxx (1976), was the most recent procedure used to decrease these behaviors. Although some success was noted, use of the procedure resulted in a variety of problems. It was a difficult and tedious procedure for staff to use. Don was resistive and often became aggressive while the procedure was being implemented; he injured staff members conducting the procedure on several occasions. Since he was resistive and had to be manually guided through the procedure, it also resulted in a risk of injury to him. In addition, extensive amounts of staff time were required to implement the procedure, resulting in less time being available to conduct habilitative activities with the other clients in the cottage. After two months, the overcorrection procedure was discontinued due to these problems.

Procedure

One alternative was to require Don to wear restrictive clothing which he couldn't rip or remove throughout the day. This would have solved the problem of ripping and stripping, but it wasn't viewed as an acceptable alternative since it wasn't an educational procedure. It also would have prevented him from participating in habilitative activities and from engaging in independent toileting behaviors.

Baseline: The frequency of Don's clothes ripping and stripping were monitored over a ten-week period. No contingencies were in effect for either behavior during this period; whenever they occurred, Don would simply be prompted to redress or replace the article of clothing he had ripped.

Treatment: DRO + Response-Contingent, Restrictive Clothing. A treatment procedure

was developed using two components: a DRO component and a response-contingent, time-limited, restrictive clothing component. Staff were instructed to reinforce Don at the end of each 30-minute period during which he did not remove his clothing. Behavior specific praise, occasionally paired with edible items, was used as a reinforcer. Each time Don ripped or attempted to remove his clothing, he was verbally reprimanded and was prompted to redress; manual guidance was used, if necessary. He was then required to put on a pair of specially adapted coveralls and to wear them for 30 minutes. Mitts were sewn onto the sleeves of the coveralls to prevent him from tearing or removing them. At the end of the 30-minute period, staff explained to Don why he had to wear the coveralls. He was then prompted to remove them and was allowed to resume his normal activities.

Baseline: After 48 weeks of treatment, the behaviors had stabilized at a low rate, and a reversal to baseline conditions was implemented.

RESULTS

As shown in Figure 1, the mean frequency of stripping during the 10-week baseline period was 80.1 incidents per week. During the initial 10-week period of the treatment condition, the mean frequency of stripping decreased to 17.0 occurrences per week.

During the final 8 weeks of the 48-week treatment condition, the mean frequency of stripping was 2.8 occurrences per week. Reversal to baseline resulted in an increase of stripping to an average frequency of 11.2 occurrences per week.

The mean frequency of ripping was 27.3 occurrences per week during the baseline period and 1.7 occurrences per week during the initial 10 weeks of the treatment condition. During the following 38 weeks of the treatment condition, the mean frequency of ripping was .3 occurrences per week. Reversals to baseline resulted in an increase of ripping to an average 1.2 occurrences per week.

DISCUSSION

Although no data are yet available on the reimplementation of the treatment condition, the decrease from the baseline condition which was maintained over a 48-week period indicates the procedure is worth considering as a method of decreasing stripping and

clothes ripping.

One advantage of this procedure is that it is less aversive for staff to implement it if the client is resistive to procedures such as overcorrection. Thus, it is easier to implement more consistently. Many treatment procedures, such as overcorrection, have been developed and described in the professional literature as effective, but if staff are resistive to using them, are physically unable to do so, or have insufficient time available, the procedures cannot be practically implemented and are not beneficial to the client. Some, in fact, can be abusive and can result in injuries if physically enforced manual guidance is required with resistive individuals.

This was not a well controlled research study: the effects of the separate components were not evaluated, and at this point we only have an ABA experimental design. However, we do think it is worth evaluating the components of the procedure under more controlled conditions and with other individuals.

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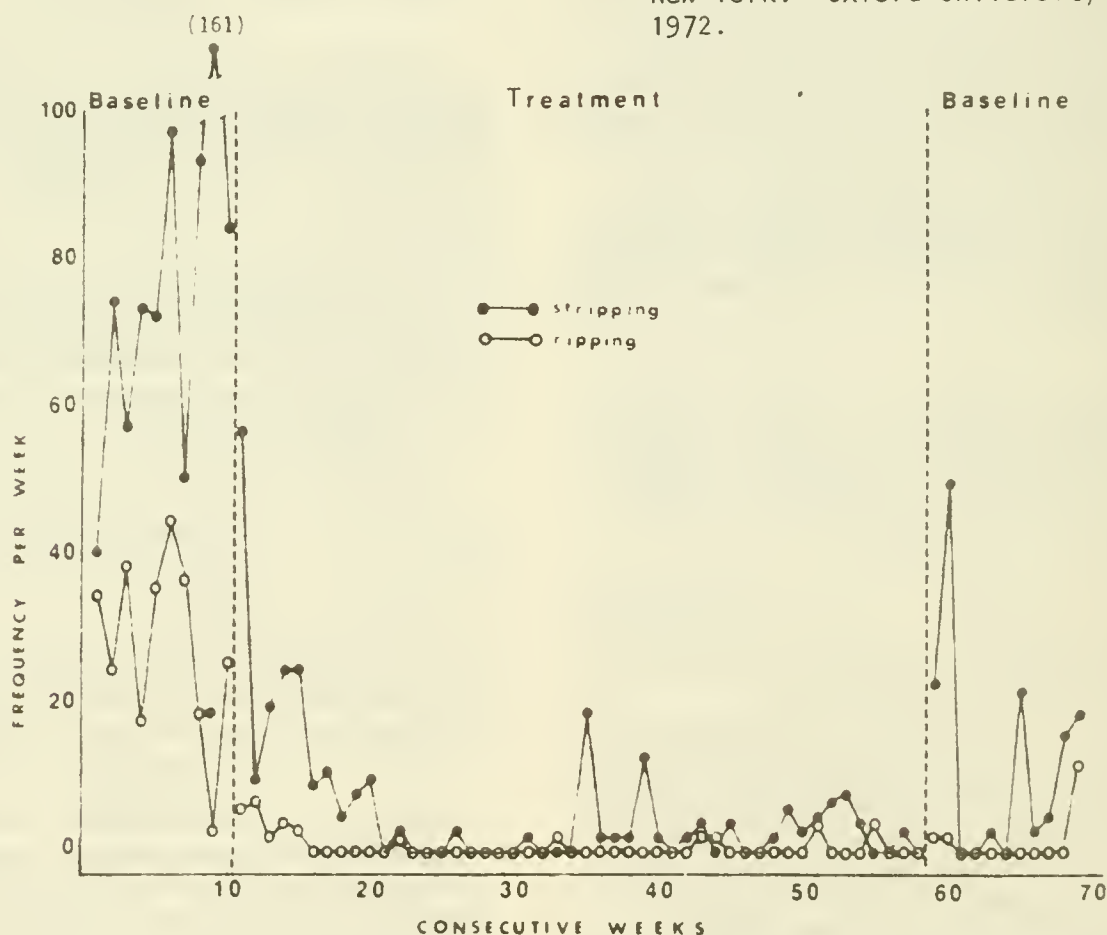


Figure 1. Frequency of stripping and clothes ripping during baseline and treatment conditions

POSITIONS AVAILABLE

COTTAGE SUPERVISOR. Responsible for supervising the overall operation of a residential facility for developmentally disabled individuals. Duties include the selection, supervision, and evaluation of staff, participation in the development of individual habilitation plans and supervision of their implementation. Requirements include an M.A. in Psychology or Special Education, knowledge of behavioral principles and management, organizational and supervisory skills. Applicants with relevant experience preferred. Annual salary (effective July 11, 1982) \$20,005.

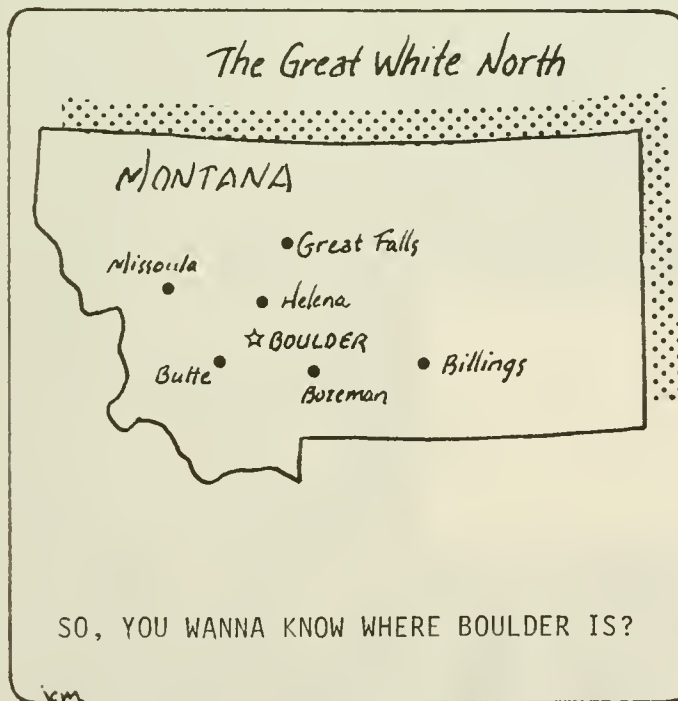
HABILITATION TRAINING SPECIALIST. Bachelor's degree in Psychology or Special Education required; applicants with experience developing skill training and behavior management programs for developmentally disabled individuals preferred. Must be knowledgeable of behavioral principles, legal and ethical guidelines, and data collection/evaluation procedures. Must be able to develop habilitative training programs, provide in-service training to staff, collect and analyze data to evaluate program effectiveness. Annual salary (effective July 11, 1982) \$17,119.

PHYSICAL THERAPIST SUPERVISOR. Starting salary (effective July 11) \$24,230 annually. Excellent benefits. Responsible for a staff of six; plans and directs therapy programs. M.A. degree in Physical Therapy preferred, will consider B.A. degree with experience. Must be licensed or eligible in Montana.

STAFF PHYSICAL THERAPIST. Starting salary (effective July 11) \$22,347 annually. Excellent benefits. Assists supervisor in planning and directing therapy programs, provides services to developmentally disabled clients. B.A. degree in Physical Therapy is required.

REGISTERED NURSE. Part-time and/or full-time positions. Starting salaries (full-time) range from \$20,542 to \$22,347 annually. Graduates of two-, three-, or four-year accredited RN programs considered.

Please direct inquiries concerning the above positions to: Personnel Office, Boulder River School and Hospital, Post Office Box 87, Boulder, MT 59632. Phone: (406) 225-3311 ext. 284. Equal opportunity employer.



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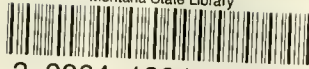
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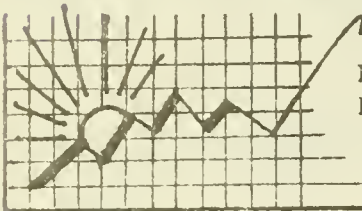
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